What is claimed is:

1. A magnetic recording medium which comprises a lower layer comprising a nonmagnetic powder and a binder and a magnetic layer comprising a ferromagnetic powder, an abrasive and a binder provided in this order on a nonmagnetic flexible support, wherein said magnetic layer has a mean thickness d ranging from 0.01 to 0.1 μm, said ferromagnetic powder is an acicular ferromagnetic alloy powder having a mean major axis length equal to or less than 0.1 μm and a saturation magnetization σs equal to or less than 120 A $\cdot$ m^2/kg, and the number of abrasive protrusions ranging in height from 5 to 10 nm on the surface of said magnetic layer ranges from 15 to 25/225 μm^2.

2. The magnetic recording medium of claim 1, wherein said ferromagnetic powder has a mean particle volume of from 1,500 to 15,000 nm^3.

3. The magnetic recording medium of claim 1, wherein said ferromagnetic powder has a coercivity Hc equal to or higher than 167 kA/m.

4. The magnetic recording medium of claim 1, wherein particles of said ferromagnetic powder existing in said magnetic layer has a fill rate by volume equal to or higher than 30 percent.

5. The magnetic recording medium of claim 1, wherein said mean thickness d of said magnetic layer ranges from 0.03 to 0.08 μm.

6. The magnetic recording medium of claim 1, wherein said magnetic layer thickness d satisfies a relation of $\sigma/d \leqq 0.5$ (σ is a standard deviation of the thickness d).

7. The magnetic recording medium of claim 1, wherein said magnetic layer has a level of residual magnetization Φr ranging from 5 to 50 mT $\cdot$ μm.

8. The magnetic recording medium of claim 1, wherein said ferromagnetic powder has a saturation magnetization σs ranging from 80 to 120 A $\cdot$ m^2/kg.

9. The magnetic recording medium of claim 1, wherein said acicular ferromagnetic alloy powder has a minor axis length ranging from 0.005 to 0.02 μm.

10. The magnetic recording medium of claim 1, wherein said acicular ferromagnetic alloy powder has an acicular ratio (major axis length divided by minor axis length) ranging from 3 to 15.